Appl. No. 10/652,986
Amdt. sent January 16, 2007
Reply to Final Office Action of October 17, 2006

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 **Listing of Claims:**

2   1.   (currently amended) A computer-readable storage medium having a

3 program for use in a host computer having a function of displaying at a user interface a plurality

4 of management information items expressing access status of a communication path for sending

5 a data input/output request from said host computer to a storage device and returning result of the

6 access request to said host computer, said storage device having a plurality of disk drives storing

7 data sent from said host computer and a disk controller controlling to store data sent from said

8 host computer to at least one logical volume corresponding to the plurality of disk drives, said

9 communication path providing communication between a host port of said information

10 processing device, a disk controller port of said disk controller, a communication cable

11 connecting between said host port and said disk controller port, and a logical volume of said

12 storage device, said program comprising:

13   code <u>configured to operate a data processor in the host computer to update</u> ~~for~~

14 ~~updating~~ at least one of said management information items being displayed to express present

15 access status of said communication path when detecting that access failure occurs at said

16 communication path based on an access to said storage device, and/or updating at least one of

17 said management information items being displayed when receiving from said user interface an

18 input for updating said management information items being displayed;

19   code <u>configured to operate the data processor to display</u> ~~for displaying~~

20 information between a communication path ID of said communication path, a disk controller port

21 ID of said disk controller port, a logical volume ID of said logical volume of said storage device,

22 and state of said communication path indicating off-line or on-line; and

23   code <u>configured to operate the data processor to change the</u> ~~for changing~~ display

24 <u>contents concerned with</u> the state of said communication path <u>from said on-line state into said</u>

25 <u>off-line state</u> in which failure has occurred among displayed plurality of communication paths

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26   based on receiving failure information from said storage device, while a failure has occurred in

27   any one of said displayed plurality of communication paths, wherein said communication path

28   comprises the host port of said information processing device, the communication cable

29   connected to the host port, and the disk controller port of the disk controller to which the

30   communication cable is also connected.

        2.   (canceled)

1   3.   (previously presented) The computer-readable storage medium according

2   to claim 1, wherein in accordance with an input for updating said management information items

3   being displayed, all of said management information items being displayed or part of said

4   management information items being displayed is updated to express present access status of a

5   communication path.

1   4.   (previously presented) The computer-readable storage medium according

2   to claim 3, wherein said part of said management information items to be updated includes at

3   least one of an execution number of data input/output as performed between said storage device

4   and said host computer and a number indicative of access failure occurred at said communication

5   path in proper execution of said data input/output.

1   5.   (currently amended) A host computer having a function of displaying at a

2   user interface a plurality of management information items concerning access status of a

3   communication path for sending a data input/output request from said host computer to a storage

4   device and returning result of access to said host computer, said storage device having a plurality

5   of disk drives storing data sent from said host computer and a disk controller controlling to store

6   data sent from said host computer to at least one logical volume corresponding to the plurality of

7   disk drives, said host computer comprising:

8   a host port which is in communication, via said communication path, with a disk

9   controller port of said disk controller, a communication cable connecting between said host port

10   and said disk controller port, and a logical volume of said storage device,

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11   a controller configured to update at least one of said management information

12   items being displayed to express present access status of said communication path when

13   detecting that access failure occurs at said communication path based on an access to said

14   storage device, and/or to update at least one of said management information items being

15   displayed when receiving from said user interface an input for updating said management

16   information items being displayed;

17   wherein said management information items include a communication path ID of

18   said communication path, a disk controller port ID of said disk controller port, a logical volume

19   ID of said logical volume of said storage device, and state of said communication path indicating

20   off-line or on-line; and

21   wherein said controller is configured to change a display of the state of said

22   communication path from said on-line state into said off-line state in which failure has occurred

23   among displayed plurality of communication paths based on receiving failure information from

24   said storage device, while a failure has occurred in any one of said displayed plurality of

25   communication paths, wherein said communication path comprises the host port of said

26   information processing device, the communication cable connected to the host port, and the disk

27   controller port of the disk controller to which the communication cable is also connected.

          6.   (canceled)

1   7.   (previously presented) The host computer according to claim 5, wherein

2   in accordance with an input for updating said management information items being displayed, all

3   of said management information items being displayed or part of said management information

4   items being displayed is updated.

1   8.   (previously presented) The host computer according to claim 7, wherein

2   said part of said management information items to be updated includes at least one of an

3   execution number of data input/output as performed between said storage device and said host

4   computer and a number indicative of access failure occurring at said communication path in

5   proper execution of said data input/output.

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1   9.   (currently amended) A control method of a host computer having a

2   function of displaying at a user interface a plurality of management information items

3   concerning access status of a communication path for sending a data input/output request from

4   said host computer to a storage device and returning result of the request to said host computer,

5   said storage device having a plurality of disk drives storing data sent from said host computer

6   and a disk controller controlling to store data sent from said host computer to at least one logical

7   volume corresponding to the plurality of disk drives, said communication path providing

8   communication between a host port of said information processing device, a disk controller port

9   of said disk controller, a communication cable connecting between said host port and said disk

10   controller port, and a logical volume of said storage device, said method comprising:

11   updating at least one of said management information items being displayed to

12   express present access status of said communication path when detecting that access failure

13   occurs at said communication path based on an access to said storage device, and/or updating at

14   least one of said management information items being displayed when receiving from said user

15   interface an input for updating said management information items being displayed;

16   displaying information between a communication path ID of said communication

17   path, a disk controller port ID of said disk controller port, a logical volume ID of said logical

18   volume of said storage device, and state of said communication path indicating off-line or on-

19   line; and

20   changing display of contents concerned with the state of said communication path

21   from said on-line state into said off-line state in which failure has occurred among displayed

22   plurality of communication paths based on receiving failure information from said storage

23   device, while a failure has occurred in any one of said displayed plurality of communication

24   paths, wherein each of said communication paths comprises the host port of said information

25   processing device, the communication cable connected to the host port, and the disk controller

26   port of the disk controller to which the communication cable is also connected.

         10.   (canceled)

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1   11. (previously presented) The control method according to claim 9, wherein

2 in accordance with an input for updating said management information items being displayed, all

3 of said management information items being displayed or part of said management information

4 items being displayed is updated.

1   12. (previously presented) The control method according to claim 11,

2 wherein said part of said management information items to be updated includes at least one of an

3 execution number of data input/output as performed between said storage device and said host

4 computer and a number indicative of access failure occurring at said communication path in

5 proper execution of said data input/output.

1   13. (previously presented) The computer-readable storage medium according

2 to claim 1, wherein the state of said communication path is changed in real time based on

3 receiving failure information from said storage device.

1   14. (previously presented) The host computer according to claim 5, wherein

2 the state of said communication path is changed in real time based on receiving failure

3 information from said storage device.

    15. (previously presented) The control method according to claim 9, wherein
the state of said communication path is changed in real time based on receiving failure
information from said storage device.